

SUBJ: SPECIAL U-2C TESTS ARTICLE 342

- 1. SPECIAL U-2C TESTS ON ARTILCE 342 WERE COMPLETED AS OF 25X1A

 14 JUNE. PLANS TO HOLD 342 IN COMMISSION WITH SPECIAL TEST INSTRUMENTATION INSTALLED UNTIL INSTRUCTIONS ARE RECEIVED REGARDING REQUIREMENT FOR ANY ADDITIONAL TESTS. IF ADVISED FURTHER TESTS NOT REQUIRED BE WILL REMOVE INSTRUMENTATION AND RETURN ARTICLE TO STANDARD CONFIGURATION.
 - 2. TEST RESULTS SUMMARIZED AS FOLLOWS 8
- A. MEASURED BATTERY AND DESTRUCTOR TEMPERATURES DURING THREE AND ONE-HALF HOUR MISSION. TEMPERATURES SATISFACTORY.
- B. INVESTIGATED BATTERY DEPLETION DUE TO SUCCESSIVE AIRSTART ATTEMPTS. TOTAL OF 19 STARTS MADE WITHOUT RECHARGING BATTERY WITH GENERATOR. TWELVE STARTS MADE BEFORE BATTERY VOLTAGE DROPPED BELOW 18 VOLTS. BATTERY BRAIN DURING THESE 12 STARTS WAS 90-95 AMPS OVER A PERIOD OF 20 MINUTES. THIS CORRESPONDS TO 30 AMPERE-HOURS AND IS VERY SATISFACTORY BATTERY OPERATION.

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- C. INVESTIGATED AIRSTARTS WITH FUEL BOOST PUMP OPERATIVE AND INOPERATIVE. STARTS WITH INOPERATIVE BOOST PUMP WERE SATISFACTORY EXCEPT IN ONE CASE AFTER FLAMEOUT AT 72,700 FEET. IN THIS CASE START WAS DIFFICULT. THREE ATTEMPTS WERE MADE BEFORE RELIGHT WAS OBTAINED AT 30,000 FEET. THIS IS ATTRIBUTED TO VAPOR IN FUEL CONTROL RESULTING FROM FLAMEOUT WITH INOPERATIVE BOOST PUMP. ENGINE OPERATED 8 MINUTES ABOVE 72,000 FEET WITH INOPERATIVE BOOST PUMP BEFORE FLAMING OUT.
- D. INVESTIGATED EMERGENCY FUEL CONTROL OPERATION. SUCCESSFUL CHANGEOVERS FROM NORMAL TO EMERGENCY SYSTEM AND BACK TO NORMAL WERE MADE UP TO 45,000 FEET. CHANGEOVER FROM EMERGENCY TO NORMAL AT 50,000 FEET RESULTED IN FLAMEOUT DUE TO ENGINE RPM SURGE. WERY GOOD AIRSTART WAS OBTAINED AT 35,000 FEET ON EMERGENCY SYSTEM. CLIMB WAS MADE TO 72,000 FEET ON EMERGENCY SYSTEM. OPERATION WAS VERY SATISFACTORY WITH GOOD POWER RESPONSE TO THROTTLE MOVEMENT. DESCENT WAS MADE ON EMERGENCY SYSTEM FROM 72,000 TO 45,000 FEET WITH NO PROBLEMS. EMERGENCY SYSTEM OPERATION WAS CONSIDERED WERY SATISFACTORY.
- 3. A REPORT ON THESE TESTS WILL BE ISSUED IMMEDIATELY.
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